

XXXIII.—*Felis chaus* and its Allies, with Descriptions of new Subspecies. By W. E. DE WINTON.

THE British Museum has lately received a fine series of the short-tailed Cats of the *Chaus* group from Egypt, collected and presented by Mr. R. J. Cunninghame. While comparing these with the typical *Chaus* from West-Central Asia, Mr. Oldfield Thomas drew my attention to a specimen from Palestine which has been in the Museum for some thirty years, and kindly suggested that I should overhaul the whole of this group.

The result of my investigation is given below, and to make the paper as concise as possible I limit it to a list of the several forms, with a table of measurements of the teeth and skulls. One form—*Felis chaus pallida* (Büchn. Bull. Ac. St. Pétersb. 1892, iii. p. 341), from the province of Gensan in China—I have not seen, but it is said to belong to this group.

*Felis chaus typica.*

*Felis chaus*, GÜLDENST. NÖV. COMM. AC. PETROP. xx. 1776, p. 483.

*Felis catolynx*, PALL. ZOOG. ROSS.-AS. i. p. 23 (1811).

The type of GÜLDENSTÄDT'S species came from the shores of the Caspian Sea. The True *Chaus* is found in the Caucasus, Persia, and Turkestan. Pallas simply renamed the same animal, as it was not quite clear that GÜLDENSTÄDT had given the name in the orthodox manner, but only generically, as distinguished from *Felis* and *Lynchus*; however, the name was used specifically by other writers in the meantime, so that it must in any case be the proper name for the animal, and I follow all recent writers in giving the credit to GÜLDENSTÄDT.

*Felis chaus affinis.*

*Felis affinis*, GRAY, III. IND. ZOO. i. pl. iii. (1830).

*Felis kutas*, PEARSON, J. A. S. B. i. 1832, p. 75.

*Felis (Lynchus) erythrotis*, HODGSON, J. A. S. B. 1836, p. 233.

*Felis Jacquemontii*, GEOFFROY, JACQUEMONT'S VOY. p. 58 (1844).

The Indian *Chaus* or Jungle-Cat is readily distinguished from the True *Chaus* by its rather longer tail, bright fox-red ears, and lighter build. The skull is narrower and the teeth are not nearly so heavy and not so crowded together. The British Museum contains a number of specimens from Nepal, the Punjab, Rajpootana, and the Central Provinces. Gray's type came from Gangootra.

*Felis chaus nilotica*, subsp. n.

*Felis Rüppellii*, Brandt, Bull. Soc. Nat. Moscou, 1832, tom. iv. p. 209  
(nec Schinz).

Brandt, recognizing the distinctness of the Egyptian Chaus, named it after the great collector who had obtained the first specimens; but unfortunately this name had already been applied by Schinz to another cat (*F. maniculata*), also found in Egypt.

As I believe this animal to differ essentially from the typical form found in Western Asia, it is necessary to provide it with a distinguishing name, and I take as the type of the subspecies an adult male, no. 98. 6. 5. 1 in the British Museum, collected by Mr. R. J. Cunninghame near Cairo, 22nd January, 1898.

The collector's measurements, taken from the fresh-killed specimen, are:—

Head and body 720 millim.; tail 270; hind foot 170; ear 64. Weight 11 lbs. 2 oz.

The measurements of another large male are given as:—

Head and body 760 millim.; tail 280; hind foot 174; ear 72. Weight 14 lbs. 3 oz.

Of a female: Head and body 620 millim.; tail 210; hind foot 145; ear 63. Weight 8 lbs. 7 oz.

The Egyptian Chaus closely resembles the True Chaus in form and colour; it is, however, rather larger, and the ears are darker and more grizzled, so do not show out against the colour of the head, as do the more foxy-red ears of both the True Chaus and the Indian species. The front of the chest is also more grizzled and darker.

In comparing the skulls of *F. chaus nilotica* with those of *F. chaus typica*, besides the greater size of the teeth, which is at once very obvious, there are several characters which seem to be quite constant. Looking at the skulls in true profile, the highest point of the cranium in *F. chaus typica* is equidistant between the nose and the occiput—that is, just *behind* the supraorbital processes, while in *F. ch. nilotica* the highest point is just *in front of* a line drawn between the points of the supraorbital processes, and so noticeably nearer to the point of the nasals than to the occiput. The intermaxillary processes in the typical form are rather more evenly tapered, while in the Egyptian form they are practically straight on the inner edge and convex or much bowed on the outer margin. In the latter form also the nasal bones are longer, reaching well beyond the back of the maxillary processes, and the palate is rather broader in the Egyptian animal.

*Felis chaus furax*, subsp. n.

In general colour and proportions very closely resembling the Egyptian Chaus, though probably rather smaller. The hind foot of the single specimen measures 145 millim., which is about equal to the hind foot of a female from Egypt.

The enormous size of the teeth distinguish this cat from any of its allies, and I cannot believe that this peculiarity is individual. The size of the canines, which are 20 millim. long and 8 broad at the alveolus, points to the specimen being a male; but the top of the skull, with a broad shield-pattern and small sagittal crest, more resembles that of a female.

The type (♂, no. 64. 8. 17. 4 in the British Museum) was obtained by Canon Tristram near Jericho in Palestine, 12th January, 1864.

In proportion to its size this cat has the largest teeth of any living member of the family Felidæ.

	Pm. 2.	Pm. 3.	Across palate outside pms. 3.	Length of skull.	Width of skull.
	mm.	mm.	mm.	mm.	mm.
<i>Felis chaus typica</i> , ♂ .....	9.3	14.5 × 8.5	45.6	119	78.5
" " " ♂ .....	9.5	14.5 × 7.5	48	..	76.2
<i>Felis chaus affinis</i> , ♂ .....	8.5	13 × 7	41.5	122	75.5
<i>Felis chaus nilotica</i> , ♂ (type)	9.5	15.5 × 8	51	132	84.5
" " " ♂ .....	10.2	15.5 × 8.7	50	120.5	78
" " " ♀ .....	9	14 × 7.5	45	108	70
" " " ♀ .....	9.5	14.1 × 7.9	47	115	74.5
<i>Felis chaus furax</i> , ♂ (type) ..	10.5	17.6 × 9.6	49.5	110	71.6

Simple figures do not convey much idea as to the size of teeth; but the importance of the above figures may be understood when it is realized that there is as little difference between the teeth of the Palestine Chaus and those of a female Leopard as there is between those of the European Wild Cat and the Indian Chaus—in fact, the flesh-teeth are actually larger than those of the Ocelot, and had the separate teeth been found fossil they would have been put down to an animal of the size of a Leopard. Therefore in this

group of Cats we have all the intermediate steps in size between the teeth of *Felis catus* and *Felis pardus*, though the animals themselves do not vary greatly in size and are not much larger than the former; they form a very distinct group, the skulls not being easily confused with those of any other Cat.

XXXIV.—*Rhynchota* from the Transvaal, Mashonaland, and British Nyasaland. By W. L. DISTANT.

PART I.

THIS paper refers to the Heteropterous family Pentatomidæ, and is based on my own and other collections acquired in the Transvaal; one made near Salisbury, Mashonaland, by Mr. Guy A. K. Marshall; and another received from Dr. Percy Rendall, when that excellent collector sojourned in Nyasaland. These three collections are enumerated separately.

Since I last wrote a faunistic paper on the *Rhynchota* some parts have appeared of the 'Catalogue Général des Hémiptères' by Lethierry and Severin, and as this publication in its arrangement generally reflects the present views of most hemipterists, and will probably be accepted as a convenient standard of classification and nomenclature, it is followed here. It is largely based on the excellent work achieved by the late Dr. C. Stål, whose 'Enumeratio Hemipterorum' has long held the ground, and is even now not altogether superseded, but rather brought up to date by the thorough work of the above catalogue so far as it has yet been published. After all, there is no finality in classification. As it has been well observed—"He that has fewest faults is the best man; and so it is with scientific systems."

In this first family, Pentatomidæ, the following species are enumerated for the three localities:—

	Species.	Sp. nov.	Gen. nov.
Transvaal . . . . .	120	16	2
Mashonaland . . . . .	36	5	1
British Nyasaland . . . . .	45	8	2

Some interesting facts in geographical distribution become apparent. Thus *Nezara pallido-conspersa*, Stål, a species hitherto recorded from Madagascar, I took myself at Pretoria; the West-African species *Bathycælia buonopoziensis*, Pal.